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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/781,795

02/20/2004

Yasuyuki Arai

0756-7256

5184

31780 7590 03/04/2009
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EXAMINER

MATTHEWS, COLLEEN ANN

ART UNIT

PAPER NUMBER

2811

MAIL DATE

DELIVERY MODE

03/04/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/781,795	Applicant(s) ARAI ET AL.	
	Examiner Colleen A. Matthews	Art Unit 2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9, 11-14, 20-27 and 63-88 is/are pending in the application.
- 4a) Of the above claim(s) 85-88 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-14 and 24-27 is/are allowed.
- 6) ☒ Claim(s) 9, 11, 20-23, 63-84 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/04/2008; 12/31/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Newly submitted claims 85-88 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the originally elected invention was towards a semiconductor device not a system including a cell phone.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 85-88 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 23: it is unclear how the flexible integrate circuit including flexible substrate is held between a first and second label when applicants drawings and specification describe the first label as the flexible substrate.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 63-73, 75-77 and 79-84 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pub. No. 2003/0032210 to Takayama.

Regarding claims 63-73, 75-77, 79-84, Takayama discloses a flexible integrated circuit capable of performing data transmission wirelessly (preamble not given patentable weight) comprising:

an integrated circuit including a rewritable memory (paragraph [0301] disposed over a substrate (412), the integrated circuit comprising thin film transistors (414a, 404b, 405, paragraph [0242]) where each includes a semiconductor thin film comprising silicon

wherein the substrate (412) has flexibility (paragraph[0247] and [0248]) and

wherein the substrate is a plastic substrate (paragraph[0247]) and

further comprising an antenna (2906 in Figure 19A and 3006 in Figure 19B) electrically connected to the integrated circuit and

an adhesive (411) interposed between the integrated circuit and the substrate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 11, 20-21, 23, 74 and 78 are rejected under 35 U.S.C. 103(a) as

being unpatentable over U.S. Pub. No. 2003/0032210 to Takayama in view of U.S. Pub. No. 2004/0256644 to Kugler et al.

Regarding claims 9 and 11, Takayama discloses a flexible integrated circuit capable of performing data transmission wirelessly (preamble not given patentable weight) comprising:

- a flexible substrate (412, paragraph [0247] and [0248]),
- an adhesive (411) over the flexible substrate;
- a metal oxide (402; paragraph [0190] lines 1-3, paragraph [0242] lines 17-18, paragraph [0246] line 4) over the adhesive;
- an insulating film (403; paragraph [0191] lines 1, paragraph [0242] lines 19-20) over the metal oxide,
- a semiconductor film (104-108 in Figure 6A) provided over the insulating film,
- a gate insulating film (118 in Figure 6B) and a gate electrode (Figure 6C elements 126-130). Takayama also discloses use of the circuit with an antenna (2906 in Figure 19A and 3006 in Figure 19B).

Takayama fails to disclose:

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- the antenna in a same layer as the gate electrode.
- the antenna with the same material as the gate electrode.
- the antenna comprising a conductive paste.

Kugler et al. teaches:

- an antenna in the same layer as the gate electrode (page 7 paragraph 75 lines 6-7).
- the antenna formed from the same material as the gate electrode (page 2 paragraph 22 lines 5-8).
- the antenna comprising a conductive paste (page 7 paragraph 76 lines 3-5).
- the gate electrode and the antenna are formed on and in contact with the gate insulating film (both the antenna and gate electrode are in the same layer (paragraph [0022]) and a common plane (paragraph [0023])).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add an antenna in the same layer as the gate electrode make the antenna with the same material as the gate electrode or a conductive paste to Takayama in order to provide an identification device with an active antenna that can be deposited on a substrate with conventional printing methods.

Regarding claim 20, Takayama discloses a container comprising a flexible integrated circuit capable of performing data transmission wirelessly, where the flexible integrated circuit (preamble not given patentable weight) comprises:

a flexible substrate (412 paragraph[0247] and [0248])),

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an adhesive (411) over the substrate;

a metal oxide (402; paragraph [0190] lines 1-3, paragraph [0242] lines 17-18, paragraph [0246] line 4) over the adhesive;

an insulating film (403; paragraph [0191] lines 1, paragraph [0242] lines 19-20) over the metal oxide,

a semiconductor film (104-108 in Figure 6A) over the insulating film,

a gate insulating film (118 in Figure 6B) and a gate electrode (Figure 6C elements 126-130), which are provided over the insulating film. Takayama also discloses use of the container with an antenna (2906 in Figure 19A and 3006 in Figure 19B)

Takayama fails to disclose:

- an antenna formed from the same material as the gate electrode

Kugler et al. teaches:

- the antenna formed from the same material as the gate electrode (page 2 paragraph 22 lines 5-8).
- the gate electrode and the antenna are formed on and in contact with the gate insulating film (both the antenna and gate electrode are in the same layer (paragraph [0022]) and a common plane (paragraph [0023])).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add an antenna in the same layer as the gate electrode to modify Takayama in order to provide an identification device with an active antenna that can be deposited on a substrate with conventional printing methods.

Regarding claim 21, Takayama as modified discloses a container according to claim 20 as above. Takayama discloses where the thin film integrated circuit is covered by a label (407).

Regarding claim 23, Takayama as modified discloses a container where the flexible integrated circuit held between a first label (412) and a second label (407) and the second label is affixed to the thin film integrated circuit with an adhesive agent (409).

Regarding claims 74 and 78: Takayama discloses the flexible integrated circuit as in claims 71 and 75 above. Takayama fails to disclose the wiring and the antenna are formed on the same surface. Kugler et al. teaches: an antenna in the same layer as a wiring (page 7 paragraph 75 lines 6-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add an antenna in the same layer a wiring to Takayama in order to provide an identification device with an active antenna that can be deposited on a substrate with conventional printing methods.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2003/0032210 to Takayama in view of U.S. Pub. No. 2004/0256644 to Kugler et al in further view of U.S. Pub. No. 2002/0027247 to Arao et al (Arao).

Regarding claim 22, Takayama as modified teaches a container according to claim 21 as outlined above.

Takayama fails to disclose:

- the protective film having a DLC or CN film

Arao et al. teaches:

- a protective film of DLC (Figure 10B element 704) provided on a thin film integrate circuit.

It would have been obvious to one of ordinary skill in the art at the time the invention was made use the DLC film of Arao et al. as the protection layer in Takayama in order to prevent the invasion of oxygen as well as water and also to mechanically protect the thin film integrated circuit.

Allowable Subject Matter

Claims 12-14 and 24-27 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claims 12 and 24, the prior art fails to anticipate or render obvious the flexible integrated circuit with the limitations including an antenna provided on the interlayer insulating film.

Response to Arguments

Applicant's arguments filed 10/28/2008 have been fully considered but they are not persuasive.

Applicant argues (Remarks page 11-12) that the prior art fails to disclose a flexible substrate. The Examiner disagrees. Takayama discloses the flexible substrate made of plastic (element 412 paragraph[0247] and [0248]).

Applicant argues (pages 11-12) that the prior art fails to teach wireless data transmission. The Examiner notes that these limitations are only recited in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colleen A. Matthews whose telephone number is (571)272-1667. The examiner can normally be reached on Monday - Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Gurley can be reached on 571-272-1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. A. M./
Examiner, Art Unit 2811

/Lynne A. Gurley/
Supervisory Patent Examiner, Art
Unit 2811